UWIN Utah Wireless Integrated Network

Technology Steering Committee

MEETING MINUTES
Friday, June 4, 2004
Millard County Sheriff's Office
10:00 am

Attendance:

Price Videoconference Location:	Rick M. Bailey (San Juan Co)
Jake Hunt (UCAN)	Floyd Ritter (State, ITS)
LTC Bart D Berry (Utah Nat. Guard)	Paul Pitts (Layton City)
CW3 Byra Sackett (Utah Nat. Guard)	Ed Frazier (Layton City)
Phil Bates (State, DPS)	Ed Spann (State, DNR)
Tim Cornia (State, DPS)	Lloyd Johnson (State, DNR)
Steve Proctor (UCAN)	*Dave Burton (State, UDOT)
Boyd Webb (State, ITS)	*Nancy McConnell (State,ITS)
Merv Gustin (Duchesne County SO)	*Jim Speth (Washington County)
Jon Tait (Motorola)	*Randy Hinton (Washington County)
Forrest Roper (Millard County SO)	*Brett Mills (Emery County)
Ed Phillips (Millard County SO)	*Randy Fisher (State, DOH)
Bryant Anderson (Commercial Business Radio)	*Steve Whittaker (Salt Lake City)
Jim Brown (State, DES/EOC)	

** Teleconferenced*

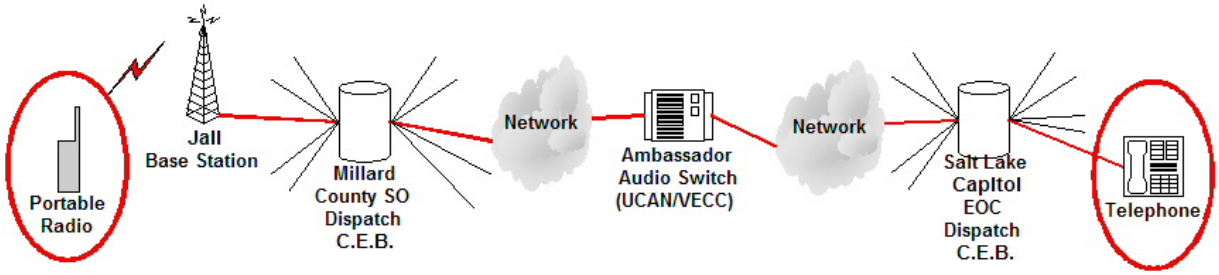
I. Approval of Previous Minutes

The minutes for the April meeting were approved without change.

II. OmniLink Voice Interoperability Project

Phil Bates (State DPS) gave an update of the OmniLink project. The dispatch centers in Richfield, Cedar, EOC, and National Guard are all on-line. There will be a major test in the next two weeks involving the military, state, and local resources. We will be bridging 800MHz and the conventional resources used in the Millard County area.

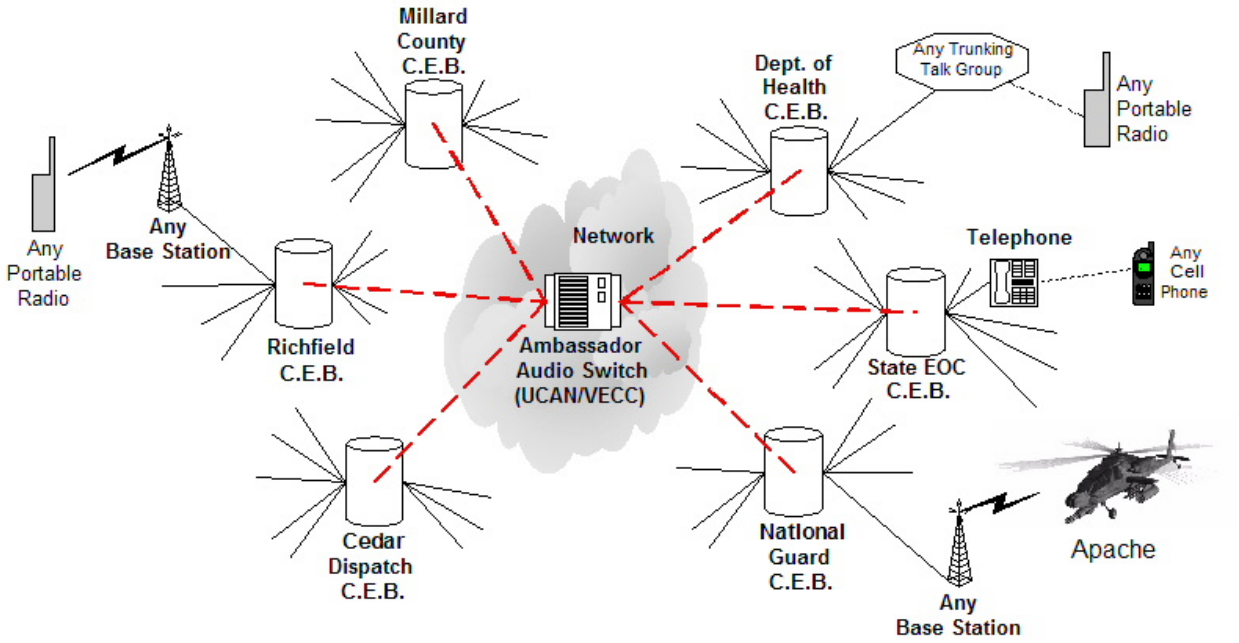
Some of the functionality and capabilities of the OmniLink solution were demonstrated by Doug Chandler (State ITS), with the help of Derol Simkins (State ITS) and Brent Thomas (State DPS). A live test was done which effectively connected a telephone user at the State Office Building in Salt Lake, to a VHF portable radio user in the basement of the Millard County SO. Doug demonstrated this connection with a diagram similar to the one below:



Phil Bates noted that the operator at the EOC has to build the phone patch out. The phone is not continually tied to a radio channel, but instead a patch must be initiated by the EOC.

Doug also pointed out that the Motorola OmniLink solution takes advantage of UCAN's Ambassador Audio Switch (AAS), to effectively link any resource associated with one dispatch center, to any other resource of any other dispatch center that is also connected to the AAS. The resources can be 800MHz, VHF, UHF, telephone, cellular phone, intercom, and of course the dispatch positions themselves.

As dispatch center Central Electronic Banks (CEB's) are connected to the Ambassador Audio Switch, the number of possible patches increases exponentially as shown by this drawing:



There was general discussion about how important it will be to develop policies and procedures on how dispatch assets from one area will be used by dispatch centers from another.

Tim Slocum (State Corrections) asked what the capacity of OmniLink was. Jon Tait (Motorola) pointed out that the only real limitation is that a patched resource cannot be used simultaneously in another patch. Bart Berry (National Guard) asked for and received confirmation that a resource could be patched to more than one resource simultaneously.

Doug Chandler stated that 800MHz conventional repeaters were being installed in rural areas of the state to allow UCAN users the ability to travel outside the current 800MHz coverage footprint and still communicate with the local dispatch centers. These channels will not be tied to talkgroups within the UCAN system, but simply tied to local dispatch centers. Utah Hill, St. George, and Frisco Peak will be the first three. UCAN will be installing a trunked site on Levan Peak. The conventional sites will be using National Interoperability Channels.

III. Mobile Data Project Team Update

Phil Bates gave an update on the pilot 700MHz mobile data project. Two weeks ago the state signed a PO for infrastructure. Delivery is scheduled for August-September. The coverage

footprint will include the I-15 corridor between Fillmore and St. George, and the Tri-Couty area of Daggette, Duchesne, and Uintah. With computer generated coverage projections, Boyd Webb (State ITS) anticipates 80% coverage from Millard to St. George. The difficult area will be the Black Ridge canyon between Cedar City and St. George. The Tri-County area will have almost 100% coverage. The I-70 corridor including down into Moab is in the planning stages.

The initial data speed will be 33KHz with 64KHz available by the end of the year. There will be no monthly charge to start, but after a testing period, there will probably be a fee somewhere in the neighborhood of $10-$15 per month. The cost for the 33K modem is $1800/car. The firmware upgrade to 64K will be $250, and the next upgrade to 128K will be an additional $250.

Phil Bates would like to pull a meeting together with Motorola and IPMobileNet and discuss ways to bridge multiple systems together. Jon Tait noted that there are network persistence routers available.

UHP's initial rollout will include 200 cars, Millard County is looking at about 20 cars, and the Tri-County area has identified 91 cars.

IV. Narrowband Migration Project

Boyd Webb is the Project Leader for Narrowband Migration. Boyd reminded everyone of the Narrowband Stay issued by the FCC. The FCC is still accepting licenses for 'wideband' channels. Boyd has seen some applications go through, and other rejected, so there seems to be some confusion at the FCC with regard to which standards are to be used.

The FCC has done two site inspections on state communications sites this year. It is historically unusual for the FCC to do spot inspections of public safety sites. If anyone has communications sites that they think might be… less than fully compliant, they should probably address them soon.

Boyd passed around a list of the 512 frequencies in the VHF narrowband pool. The 'old' wideband channels were listed along with them. Boyd was unable to get the projector to work with his laptop so he was unable to show a PowerPoint that he had prepared. These two documents are hyper-linked in this paragraph; they are also available on the UWIN Technology Steering Committee Website, under the Narrowband Migration Project team section. http://uwin.utah.gov/techcommittee/techcommittee.html

There have not been very many narrowband licenses issued. If anyone licenses a narrowband channel next to a wideband channel, and there is interference, the new narrowband channel is primary; the pre-existing wideband user is secondary and may have to evacuate the channel. The frequencies specifically designated for narrowband cannot be licensed for wideband emissions – even with the FCC stay.

When the FCC issued the order for narrowbanding, they did not give instructions on how to make it happen. Having multiple frequency coordinators means a successful narrowband

migration will require consensus. If an agency in any area decides "*No, I don't like the UWIN plan, I'm going to do my own thing*.", then the plan won't work in that area.

Floyd Ritter has created a technology plan for optimizing how transmit and receive channels are paired, but in a battle of best technology vs. politics, best technology frequently loses. Floyd sits on a national committee addressing VHF narrowbanding issues.

The first hurdle is to make sure agencies have narrowband capable equipment. The new 700MHz spectrum is strictly digital narrowband. The coverage differences between wideband and narrowband equate to approximately 25% less coverage in a narrowband compliant base stations. Mountaintop locations will be hit pretty hard on Effective Radiated Power (ERP). Some sites currently running hundreds of watts from a mountaintop, may be restricted to just a few watts. The impact of transmitting with a fraction of the power is not as bad as it sounds, but it will affect "fringe" areas.

The best opportunity for us to reach consensus is to have as much participation as possible. Please contact a UWIN Technology Steering Committee member to find out how to join the Narrowband Migration Team. The project team leader, Boyd Webb, can be contacted at:
boydwebb@utah.gov
(801) 965-3857

V. Wireless Ethernet Project Team Update

Tim Cornia is the Project Team leader for Wireless Ethernet. By July 1, we (URPC) have to have our plan submitted to the FCC. Boyd Webb drafted a 4.9GHz plan than is open for review and comment. Two things still needing to be addressed:

1. How are we going to track 4.9GHz usage?
2. How do we address mobile 4.9 GHz?

Jake Hunt suggested that copies of the document be sent to larger agencies around the state (not just an open invite to come look at the web site).

Steve Proctor informed the group that the URPC 4.9GHz plan has been sent to all of the surrounding states for review (except Mexico, who has not convened yet). Steve anticipates forwarding the document to the FCC after the URPC meeting next Friday in Moab. Steve also mentioned that a segment of Colorado is looking at getting grant monies for exploring 4.9GHz applications. Steve thought that would be a great idea for all of us to learn from.

San Diego is working to complete a 802.16e deployment by the end of this month. It will include a VLAN for 1st responders.

State ITS has been looking at a centralized authentication solution -Utah Master Directory (UMD) for 802.11. For those agencies that may not be able to afford using a UMD solution, that may charge some kind of fee, the project team is looking at working out some kind of trade for local government agencies. The trade might be allowing state users to utilize a local government 802.11 network in return for UMD authentication access. A local/primary database might be another solution.

Tim is favoring a software standard rather than a hardware. This would allow agencies to purchase whatever hardware they choose –so long as it can handle the software solutions. Tim is trying to stay in communication with agencies to see what solutions they are working with. UDOT is deploying a Motorola Canopy solution in the St. George area –primarily for video camera connectivity. Full motion cameras will be for St. George City, still shots will be brought back to the Salt Lake Traffic Operations Center.

Tim Cornia noted that attendance has been low in the Project Team meetings. He wants to make sure one or two agencies are not trying to decide standards on what they *think* everyone else needs. Contact tcornia@utah.gov to participate in the project team.

Jon Tait (Motorola) suggested we address the impact to end users in order to get more participation in the meetings.

Steve Proctor suggested a Glossary of terms be put on the Web Site to help address questions that people are having about the numerous terms. Doug Chandler will have a Glossary started and posted on the web site by the next meeting.

VI. Next Meeting

Duchesne UT
10:00 am, Friday July 9, 2004
Search and Rescue Building (Training Room)
21554 W. 900 S.

Directions:
Coming from the Salt Lake/Heber direction, you're traveling East on I-40 (turns into Duchesne Main Street):

1. Turn left on Center Street (Zion's Bank intersection); you'll be traveling North.

2. Turn right on West Stake Center Drive (heading SE now). This road is a little ways out of town, near the top of a hill.

3. Take first left (heading east now). Look for signs to "Duchesne Justice Complex".